

Test

- Solve 3 variable systems by hand (3.6)

- Find the inverse of a 2×2 by hand

$$\frac{1}{ad-bc} \begin{bmatrix} d & -b \\ -c & a \end{bmatrix} \quad A \cdot A^{-1} = I = \begin{bmatrix} 1 & 0 \\ 0 & 1 \end{bmatrix}$$

- determinants $ad-bc$, if it is zero, no inverse

- set up and solve matrix equations

$$2 \begin{bmatrix} 4 & 3 \\ 2 & 1 \end{bmatrix} - X = \begin{bmatrix} 6 & -5 \\ 3 & 2 \end{bmatrix}$$

$$\begin{bmatrix} 2 & 4 \\ 3 & 1 \end{bmatrix} \cdot \begin{bmatrix} x \\ y \end{bmatrix} = \begin{bmatrix} 5 \\ 13 \end{bmatrix}$$

$$A \cdot X = B \quad X = A^{-1} \cdot B \quad X = \begin{bmatrix} 4.7 \\ -1.1 \end{bmatrix} \quad \begin{matrix} x = 4.7 \\ y = -1.1 \end{matrix}$$

- Matrix Basics

- Dimensions
- entries $a_{i,j}$
- Add/subtract/multiply

- Nut-like problem #39, p. 226

p. 163 #43, 45

p. 226 #42

p. 229 #11-13, 17-22, 25, 26, 36, 37, 41, 43, 44